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Report to STAKEHOLDERS

<http://www.edwards.af.mil/penvmng/index.html>

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Environmental Management goes to the show. Pictures from the 2005 Edwards Air Force Base Open House and Air Show.

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More than just aluminum, glass and paper can be recycled. Take a look at Edwards' efforts in recycling concrete!



NONHAZARDOUS REPLACEMENT — Airman 1st Class Felicia Kenerson rinses a part coated in a biodegradable penetrant. Replacing an old oil-based penetrant with a biodegradable material has saved the Air Force hazardous waste costs.

Preventing pollution makes sense. Using a nonhazardous substitute or finding a clean technology increases worker safety, saves time and money, and reduces hazardous waste. What makes even more sense is to have the effort start at the lowest level.

“The spirit of Pollution Prevention starts in the shop,” said Layi Oyelowo, Edwards AFB Pollution Prevention, or P2, manager. “Workers and managers at the shop level have the greatest opportunity to reduce future pollution and hazardous waste costs because they understand their processes better than anyone else.”

Three shops at Edwards came up with better ways to do things that are preventing pollution. The impact of each of these improvements may not seem like much on its own, but adding them to similar P2 efforts in many other shops at Edwards, adds up to big savings.

Nondestructive Inspection Facility

The 412 Equipment Maintenance Squadron (EMS) Nondestructive Inspection Facility has a crucial job: they inspect the structural integrity of Edwards AFB aircraft. One of their most important tasks is to find tiny cracks in aircraft parts. To do this, they coat a part

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If you have a question about the Edwards Air Force Base Environmental Management program, you may address it to Stakeholders Forum, Attn: Gary Hatch or Miriam Harmon, 5 E. Popson Ave., Edwards AFB, CA 93524-8060, or send e-mail to: gary.hatch@edwards.af.mil

Next RAB Meeting

**Time and Date
To Be
Determined**

The public is invited.

Q. Does the government allow hunting at Edwards Air Force Base?

A. Yes. Hunting on the base is open to active duty and retired military members, Department of Defense, tenant organization and contractor employees assigned to Edwards and their dependents and guests. Permits are required and may be purchased at Outdoor Recreation or the Rod and Gun Club during regular business hours.

Hunters must follow California Department of Fish and Game and Air Force regulations. Seasons and bag limits are set by the California Department of Fish and Game. The Environmental Management's Conservation branch manages the hunting program.

Q. What species may be hunted?

A. Birds include ducks, geese, brant, quail, chukar, mourning doves, white-winged doves, band-tailed pigeons, American coots, common moorhens, and common snipe (jacksnipe).

Jackrabbits and cottontail rabbits may also be hunted.



A mallard duck swims at Piute Ponds.

Q. Where is hunting allowed?

A. Piute Ponds, located on the extreme southwestern corner of the base is a prime hunting area for ducks, geese, and many other species. Duck blinds are available for eligible hunters via a drawing every August.

Several locations on base are available for upland game hunters. Most base land has not been available for grazing since the early 1950s, so many of these hunting locales are in near pristine condition. They include the Bissell Hills on the west side of the base; Graham Ranch vicinity between the combat arms range and Buckhorn Dry Lake on the west, Lancaster Boulevard on the east, and Red Barn Marsh on the south. Dove hunting is allowed near Piute Ponds during the early season.

A group of volunteer wildlife conservationists maintains hunting areas and monitors their use.

Q. Where can I get more information on hunting at Edwards Air Force Base?

A. Please visit our hunting web page: <http://www.edwards.af.mil/penvmng/aboutedwards/Conservation/hunting.htm>

RTS

Report to Stakeholders is a publication of the Edwards AFB Environmental Management Division. Its purpose is to inform and educate the public, base workers and residents about continuing Environmental Management efforts at Edwards AFB. It currently has a circulation of 6,000, including about 2,000 subscribers.

Contents of the *Report to Stakeholders* are not necessarily the official view of, or endorsed by, the U.S. government, the Department of Defense, or the Department of the Air Force.



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**Report to
STAKEHOLDERS**





EDUCATIONAL FUN

Biologist Andrea Currylow (sitting left with the green shirt) and Information Services Supervisor Sandra Stapleton (sitting right of her) sit at the Natural Resources table to explain and show visitors the kinds of reptiles that exist at Edwards Air Force Base during the 2005 Air Show.

Environmental Management goes to the show



STAR OF THE SHOW — Boomer the tortoise, finds a little sunlight in the midst of the natural display at the 2005 Air Show. He postponed the beginning of his winter hibernation to put in an appearance at the show.

An estimated 7,000 people visited Environmental Management's booth at the Edwards Open House and Air Show held October 22 and 23.

The booth featured activities for kids as well as information for the older crowd on environmental activities at Edwards Air Force Base. Popular again this year was Boomer, a 40-year-old desert tortoise, who crawled all over EM's natural resources display, when he wasn't trying to escape. Rupert, an 8-year-old desert tortoise was also there, along with a variety of snakes found at Edwards.

The two-day event attracted 75,000 visitors who braved the sun to watch the latest in military aircraft. In between flights, attendees flooded the static displays, including EM's booth.

RTS

Not just plastic, glass and aluminum anymore...

Edwards recycles and reuses concrete



BREAKING IT UP — A demolition contractor breaks up concrete and loads it into a truck.



MOVING IT OUT — A truck transports the broken concrete from the demolition site to the base landfill, where it is dumped in piles.



SMASHING IT TO BITS — A skid loader dumps large pieces of concrete into a hopper. The machine crushes the concrete and conveyor belts move it into piles.



MULCHING PLANTS — At this site, 16 tons of recycled concrete was used as landscape cover, which helps reduce water use and erosion.



Recycling Concrete

A case study for recycling concrete at Edwards Air Force Base identifies the benefits.

The base landfill accepts approximately 5,900 tons of refuse per year. Each demolished base house produces about 150 tons of broken concrete and 42 tons of other materials.

All of Housing Area F is due for demolition over the next few years. In Area F, 240 of the 638 houses are planned to be demolished in fiscal year 2006. This will produce about 36,000 tons of broken concrete and 10,800 tons of other materials.

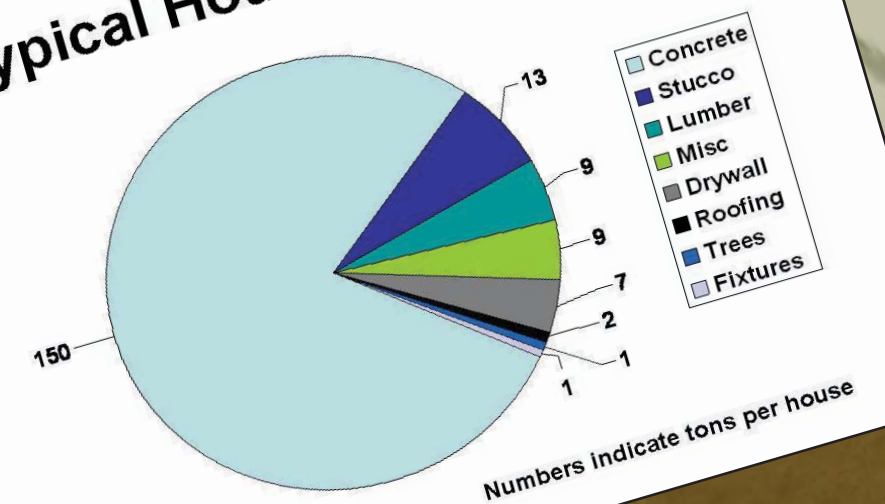
If all the demolition material were taken to the landfill, nearly 8 years of typical refuse disposal landfill space would be used in the process.

By segregating and diverting as much of this material as possible, the life of the landfill has been extended by 8 years from this one project alone!!

Some possible reuses for recycled concrete

- Landscaping cover
- Subbase for roads
- Aggregate for road shoulders
- Base for building foundations
- Fill for utility trenches
- Erosion control in drainages

Typical Housing Demolition



Pollution prevention, from page 1

with a phosphorescent penetrant, rinse it several times and then put it in a developer. Using an ultraviolet light at an inspection booth, technicians see any cracks highlighted by the penetrant.

The NDI facility replaced the old chemical penetrant they used to detect cracks with another that is biodegradable. “The new penetrant causes very little to no harm to the environment,” said Donald Rothman, WG-11 Nondestructive Technician.

Because the new penetrant was safer for the environment, the shop was able to replace a costly and smelly old carbon filtration system and use the base waste treatment facility. In the process, they even regained some floor space. The combined savings from using a biodegradable penetrant and removing the carbon filtration system is almost \$50,000 a year.

Instrumentation

Special Instrumentation consists of data acquisition systems, recorders, cameras and sensors. These are temporarily installed in aircraft for testing. The group that installs special instrumentation are the workers of the 412 Maintenance Squadron (MX) Modification Dock. Hooking this special instrumentation into a test aircraft requires miles of bright orange wires. And each of these wires needs to be marked for easy identification.

Until recently, the 412 MX Modification Dock had an ink jet wire marking system that used a methyl ethyl ketone-based, or MEK, ink. Use of MEK is regulated under several environmental laws, and once it is contaminated or three months old, it is hazardous waste.

In their old system, the machine would pull the wire past an ink jet print head. The ink was then dried



BETTER RESULTS, EASIER CLEANUP — Steve Stutz, JT3 Electromechanical Technician at the 412 MX Modification Dock, labels wire using the laser wire marking machine. Use of the machine has reduced maintenance and hazardous waste costs while creating rub-proof marks on the wire.

using an ultraviolet light. Because the wire is Teflon™ or tefzel-jacketed and the ink was applied to the surface, the ink could be rubbed off during normal use.

Cleaning the machine each quarter took 4 hours and used a lot of MEK – 1½ gallons. “Any MEK you poured in to flush the system was contaminated, so it became hazardous waste,” said Dan Bohlinger, box fabrication lead for the 412 MX.

According to Bohlinger, even reloading the ink was a problem because the machine’s ink storage held 1½ liters and the ink only came in 1-liter packages. The half liter of MEK-based ink left over in the package had to be put in with the hazardous waste.

When it came time to replace the machine, the 412 MX found a better solution: a laser marking system.

The new machine pulls wire past a laser that etches and discolors the wire jacket – making a permanent mark that won’t rub off.

Bohlinger admits they were most interested in getting a permanent mark, but maintaining the laser wire marking machine has impressed him. “We’re saving a bundle in maintenance costs,” Bohlinger said. The chemicals and filters for the ink system cost \$1,425 per year, not including Haz-mat handling costs.

Maintenance is safer and simpler. Four hours of flushing and cleaning the system with a hazardous material has turned into wiping a few lenses, filling up a reservoir with deionized water, and changing out a few paper filters. “It’s much cheaper because there are no chemicals,” he said.

Munitions

The 412 EMS Munitions Flight at South Base replaced a messy, time-consuming old technology – spray paint and stencils – with a simple, new technology that reduces labor, time and hazardous material costs.

The old method for labeling a cardboard box involved a technician cutting a stencil (about 3 to 5 minutes each). Then they'd use that stencil and spray paint to label the box. The box would have to dry for up to 10 minutes before it could be stored or prepared for shipment.

Multiply that 15 minutes by the 60 labels they do each day and the need for a new solution becomes apparent. Their solution: they bought a label maker.

"Now it takes just the time to type the label on the computer," said Tech. Sgt. Christopher Nagel, Noncommissioned Officer in Charge of Munitions Inspection. "We love it. The system is fantastic."

Labels have other benefits as well. They are easier to read, they don't smudge, and the shop has reduced their use of aerosol paint cans by 800 cans in the last year (a savings of \$1,250 in hazardous waste disposal costs alone). Eliminating aerosol paints also lessens harmful air quality emissions and eliminates having to deal with the used cans as hazardous waste.

RTS



SIMPLE SOLUTION SAVES TIME — Staff Sgt. James R. Green labels a box at the 412 MX Munitions Flight. Printed labels replaced stencils and spray paint in the shop, saving time and money spent disposing of hazardous waste.

State waste management official gets her hands dirty



Mike Ferola (left), a contractor working for J. Torres Co. at the base recycling center, discusses Edwards' plastic recycling efforts with Rosario Marin (right), Chair of the California Integrated Waste Management Board. In the forefront is a bale of plastic to be recycled. Marin toured the base and visited the recycling center, landfill and composting operations in August.

Right, Marin took a turn at sorting recyclables out of the regular trash.



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Published data and documents relating to the Environmental Restoration Program are available for public review in information repositories at four locations. The current information repositories are located in the cities of Boron, Lancaster and Rosamond, as well as Edwards AFB. They are updated when new documents are released.

If you have any questions about information in the repositories, please contact Gary Hatch, Environmental Public Affairs at (661) 277-1454 or through e-mail at gary.hatch@edwards.af.mil.



Location	Days and Hours of Operation	
Edwards AFB Library 5 W. Yeager Blvd. Building 6225 Edwards AFB, Calif. (661) 275-2665	Mon-Thurs	9:30 a.m. - 7 p.m.
	Fri.	9:30 a.m. - 6 p.m.
	Sat & Sun	10:30 a.m. - 6 p.m.
Kern County Public Library Wanda Kirk Branch 3611 Rosamond Blvd. Rosamond, Calif. (661) 256-3236	Tue & Wed	Noon - 8 p.m.
	Thurs-Sat	10 a.m. - 6 p.m.
Los Angeles County Public Library 601 W. Lancaster Blvd. Lancaster, Calif. (661) 948-5029	Mon-Wed	10 a.m. - 8 p.m.
	Thurs & Fri	10 a.m. - 5 p.m.
	Sat	11 a.m. - 5 p.m.
Col. Vernon P. Saxon, Jr. Aerospace Museum 26962 Twenty Mule Team Road Boron, Calif. (760) 762-6600	Mon-Sun	10 a.m. - 4 p.m.



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